

TEMPERATURE COMPENSATION SYSTEMS AND METHODS FOR USE WITH READ/WRITE HEADS IN MAGNETIC STORAGE DEVICES

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ABSTRACT OF THE DISCLOSURE

Disclosed herein are methods and systems for sensing and controlling the temperature of a resistive element configured for use in a read/write head of a magnetic data storage device. In one embodiment, a method includes detecting a voltage across the resistive element, where the voltage varies as a function of a temperature of the
10 resistive element. The method also includes comparing the voltage to a predetermined value to determine a variation of the voltage from the predetermined value, and then altering a power applied to the resistive element based on the variation. In this exemplary embodiment, the temperature of the resistive element is then controlled as a function of the altered applied power.